APPENDIX K

ESTIMATES OF ADDITIONAL TRIPS GENERATED BY PROPOSED DEVELOPMENTS

Project: Washington Clinic Site

Proposed Development Trip Generation

Data:

125 Condominiums

3000 SF - Day Care Center

1.1 parking spaces per unit (including 8 for visitors)

4 spaces for the Day Care Center

From Institute of Transportation Engineers:

In Out	
(directional (directional	
flow) flow)	Residential Development Luxury Condos
Traffic 23% 77%	0.56 Ave. Trip Rate AM Peak Hour of Adjacent Traffic
Traffic 63% 37%	0.55 Ave. Trip Rate PM Peak Hour of Adjacent Traffic
	Day Care Center
Traffic 53% 47%	12.71 Ave. Trip Rate AM Peak Hour of Adjacent Traffic
Traffic 47% 53%	13.2 Ave. Trip Rate PM Peak Hour of Adjacent Traffic
Traffic 63% 3 Traffic 53% 4	0.55 Ave. Trip Rate PM Peak Hour of Adjacent TrafficDay Care Center12.71 Ave. Trip Rate AM Peak Hour of Adjacent Traffic

Trip Rates:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	In	Out	Total
Residential Condos	Trips Per Residential Units	0.13	0.43	0.56	0.35	0.20	0.55
Day Care Center	Trips Per 1000 SF	6.74	5.97	12.71	6.20	7.00	13.2

Trip Generation:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
Residential		16	ΕΛ	70	42	25	60
Condos	Trips Per Residential Units	16	54	70	43	25	68
Day Care		20	18	38	19	21	40
Center	Trips Per 1000 SF	20	10	30	19	21	40
	Total	36	72	108	62	46	108

Trip Reductions: Residential Commercial

Total	50%	50%
Pass-By trips	0%	10%
Internal Capture (People Walking)	10%	10%
Transit	40%	30%

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
Residential		8	27	35	22	13	35
Condos	Trips Per Residential Units	O	21	00	22	10	00
Day Care		10	9	19	10	11	21
Center	Trips Per 1000 SF	10	9	19	10	11	21
	Total	18	36	54	32	24	56

Existing Development Trip Generation

Data:

43,840 Washington Clinic

The site was vacated by March 31st.

Traffic counts for the Frinedship Heights study was collected after the clinic was closed.

	P	AM Peak Ho	our	PI	M Peak Hoι	ır
	In	Out	Total	ln	Out	Total
Total	18	36	54	32	24	56

Project: BUICK SITE

Proposed Development Trip Generation

Data:

100 Condominiums High End

20,000 SF - Retail

2 underground levels for residents

From Institute of Transportation Engineers:

	In	Out
	(directional	(directional
Residential Development Luxury Condos	flow)	flow)
0.56 Ave. Trip Rate AM Peak Hour of Adjacent Traffic	23%	77%
0.55 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	63%	37%

Retail - Specialty Retail Center

0.71 Ave. Trip Rate AM Peak Hour

Trip rate for the AM peak was calculated by applying AM and PM peak hour trip rate relationship for Shopping Center Data (relatively similar to speciality retail center) to PM peak hour for this category.

2.59 Ave. Trip Rate PM Peak Hour of Adjacent Traffic

43% 57%

Trip Rates:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	In	Out	Total
Residential		0.13	0.43	0.56	0.35	0.20	0.55
Condos	Trips Per Residential Units	0.13	0.43	0.56	0.33	0.20	0.55
Retail		0.44	0.21	0.71	1 11	1 10	2.50
Specialty	Trips Per 1000 SF	0.41	0.31	0.71	1.11	1.48	2.59

		AM Peak Hour			PM Peak Hour		
Land Use	Units	In	Out	Total	In	Out	Total
Residential		12	42	56	25	20	EE
Condos	Trips Per Residential Units	13	43	36	35	20	55
Retail		0	6	14	22	30	52
Specialty	Trips Per 1000 SF	0	0	14	22	30	52
	Total	21	49	70	57	50	107

Trip Reductions:	Residential	Commercial
Transit	40%	30%
Internal Capture (People Walking)	10%	10%
Pass-By trips	0%	10%
Total	50%	50%

^{*} AM peak hour trip rate data was not provided in ITE Trip Generation Manual for this category.

Adjusted Trip Generation:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	In	Out	Total
Residential		7	22	20	10	10	20
Condos	Trips Per Residential Units	1	22	29	18	10	28
Retail		4	2	7	11	15	26
Specialty	Trips Per 1000 SF	4	3	/	11	15	20
	Total	11	25	36	29	25	54

Existing Development Trip Generation

Data:

20,000 SF Gross Floor Area (GFA) - Retail

From Institute of Transportation Engineers:

In Out (directional

Retail - Car Dealership

2.21 Ave. Trip Rate AM Peak Hour of Adjacent Traffic2.8 Ave. Trip Rate PM Peak Hour of Adjacent Traffic

flow) flow) 73% 27% 40% 60%

Trip Rates:

		AM Peak Hour			F	M Peak Hou	ır
Land Use	Units	In	Out	Total	In	Out	Total
Car Dealership	Trips Per 1000 SF	1.61	0.60	2.21	1.12	1.68	2.8

Trip Generation:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	In	Out	Total	ln	Out	Total
Car Dealership	Trips Per 1000 SF	32	12	44	22	34	56
	Total	32	12	44	22	34	56

Trip Reductions: Residential Commercial

Transit 40% 30%
Internal Capture (People Walking) 10% 10%
Pass-By trips 0% 10%

Total 50% 50%

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	In	Out	Total
Car Dealership	Trips Per 1000 SF	16	6	22	11	17	28
	Total	16	6	22	11	17	28

	ı	AM Peak Hou	r	PM Peak Hour			
	In	Out	Total	ln	Out	Total	
Total	-5	19	14	18	8	26	

Project: WMATA

Proposed Development Trip Generation

Data:

800 Apartments

90,000 SF - Retail

1,000 cars (above ground)

170,000 Bus depot below grade

From Institute of Transportation Engineers:

	In	Out
	(directional	(directional
Residential - Apartments	flow)	flow)
0.51 Ave. Trip Rate AM Peak Hour of Adjacent Traffic	16%	84%
0.62 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	67%	33%

Retail - Specialty Retail Center

0.71 Ave. Trip Rate AM Peak Hour

Trip rate for the AM peak was calculated by applying AM and PM peak hour trip rate relationship for Shopping Center Data (relatively similar to speciality retail center) to PM peak hour for this category.

2.59 Ave. Trip Rate PM Peak Hour of Adjacent Traffic

43% 57%

Trip Rates:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	In	Out	Total
Residential		0.00	0.42	0.51	0.42	0.20	0.60
Apartments	Trips Per Residential Units	0.08	0.43	0.51	0.42	0.20	0.62
Retail		0.44	0.24	0.74	1 11	1 10	2.50
Specialty	Trips Per 1000 SF	0.41	0.31	0.71	1.11	1.48	2.59

		AM Peak Hour			PM Peak Hour		
Land Use	Units	In	Out	Total	ln	Out	Total
Residential		65	343	408	332	164	496
Apartments	Trips Per Residential Units	05	343	400	332	104	490
Retail		37	28	65	100	133	233
Specialty	Trips Per 1000 SF	31	20	00	100	133	233
	Total	102	371	473	432	297	729

Trip Reductions:	Residential	Commercial
Transit	40%	30%
Internal Capture (People Walking)	10%	10%
Pass-By trips	0%	10%
Total	50%	50%

^{*} AM peak hour trip rate data was not provided in ITE Trip Generation Manual for this category.

Adjusted Trip Generation:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	In	Out	Total	In	Out	Total
Residential		33	172	205	166	82	248
Apartments	Trips Per Residential Units	33	172	205	100	02	240
Retail		10	14	22	E 0	67	117
Specialty	Trips Per 1000 SF	19	14	33	50	67	117
	Total	52	186	238	216	149	365

Existing Development Trip Generation

WMATA will continue with the same number of operations. No trips need to be removed.

	,	AM Peak Hou	r	PM Peak Hour			
	In	Out	Total	ln	Out	Total	
Total	52	186	238	216	149	365	

Project: CHEVY CHASE CENTER

Proposed Development Trip Generation

Data:

315,800 SF - General Office Building

76,200 SF - Retail

20,000 SF - Supermarket

From Institute of Transportation Engineers:

	In	Out
	(directional	(directional
Office - General Office Building	flow)	flow)
1.56 Ave. Trip Rate AM Peak Hour of Adjacent Traffic	88%	12%
1.49 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	17%	83%
Retail - Specialty Retail Center		
0.71 Ave. Trip Rate AM Peak Hour		
* AM peak hour trip rate data was not provided in ITE Trip Generation Manual for this category.		
Trip rate for the AM peak was calculated by applying AM and PM peak hour trip rate relationship for Shopping Center Da	ata	
(relatively similar to speciality retail center) to PM peak hour for this category.		
2.59 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	43%	57%
Supermarket		
3.25 Ave. Trip Rate AM Peak Hour of Adjacent Traffic	61%	39%
11.51 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	51%	49%

Trip Rates:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
General		1.37	0.19	1.56	0.25	1.24	1.49
Office Bldg	Trips Per 1000 SF	1.37	0.19	1.50	0.25	1.24	1.49
Retail		0.44	0.31	0.71	1.11	1 10	2.50
Specialty	Trips Per 1000 SF	0.41	0.31	0.71	1.11	1.48	2.59
Supermarket	Trips Per 1000 SF	1.98	1.27	3.25	5.87	5.64	11.51

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
General		434	59	493	80	391	471
Office Bldg	Trips Per 1000 SF	454	59	493	80	391	47 1
Retail		31	23	54	85	112	197
Specialty	Trips Per 1000 SF	31	23	54	00	112	197
Supermarket	Trips Per 1000 SF	40	25	65	117	113	230
	Total	505	107	612	282	616	898

Trip Reductions:	Residential	Commercial
Transit	40%	30%
Internal Capture (People Walking)	10%	10%
Pass-By trips	0%	10%
Total	50%	50%

Adjusted Trip Generation:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
General Office Bldg	Trips Per 1000 SF	217	30	247	40	196	236
Retail Specialty	Trips Per 1000 SF	16	12	28	43	56	99
Supermarket	Trips Per 1000 SF	20	13	33	59	57	116
	Total	253	55	308	142	309	451

Existing Development Trip Generation

Data:

47,091 SF - Retail

16,700 SF Gross Floor Area (GFA) - Supermarket

34,361 SF Office

From Institute of Transportation Engineers:

	In (directional	Out (directional
Retail - Specialty Retail Center	flow)	flow)
0.71 Assumed based on comparison of Shopping Center Data (1.03 AM vs. 3.74 PM)		
2.59 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	43%	57%
Retail - Supermarket		
3.25 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	61%	39%
11.51 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	51%	49%
Office - General Office Building		
1.56 Ave. Trip Rate AM Peak Hour of Adjacent Traffic	88%	12%
1.49 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	17%	83%

Trip Rates:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
Retail	Trips Per 1000 SF Gross	0.41	0.31	0.71	1.11	1.48	2.59
Specialty	Leasable Area	0.41	0.51	0.71	1.11	1.40	2.59
Super	Trips Per 1000 SF Gross Floor	1.98	1.98 1.27	3.25	3.25 5.87	5.64	11.51
market	Area (GFA)						11.51
Office Bldg	Trips Per 1000 SF	1.37	0.19	1.56	0.25	1.24	1.49

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
Retail	Trips Per 1000 SF Gross	19	14	33	52	70	122
Specialty	Leasable Area	19	14	33	52	70	122
Super	Trips Per 1000 SF Gross Floor	22	21	ΕΛ	98	04	102
market	Area (GFA)	33	33 21	54	90	94	192
Office Bldg	Trips Per 1000 SF	47	6	53	9	42	51
	Total	99	41	140	159	206	365

Trip Reductions: Residential Commercial

Total	50%	50%
Pass-By trips	0%	10%
Internal Capture (People Walking)	10%	10%
Transit	40%	30%

Adjusted Trip Generation:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	In	Out	Total	ln	Out	Total
Retail	Trips Per 1000 SF Gross	10	7	17	26	35	61
Specialty	Leasable Area	10	/	17	20	33	01
Super	Trips Per 1000 SF Gross Floor	17	11	28	49	47	06
market	Area (GFA)	17	11	20	49	47	96
Office Bldg	Trips Per 1000 SF	24	3	27	5	21	26
	Total	51	21	72	80	103	183

	,	AM Peak Hou	ır	F	M Peak Hou	ur
	ln	Out	Total	ln	Out	Total
Total	202	34	236	62	206	268

Project: HECHT'S

Proposed Development Trip Generation

Data:

433 High Rise Apartments

305,000 SF - Office 300,000 SF - Retail

From Institute of Transportation Engineers:

	In	Out
	(directional	(directional
Residential - High Rise Apartments	flow)	flow)
0.30 Ave. Trip Rate AM Peak Hour of Adjacent Traffic	25%	75%
0.35 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	61%	39%
Office - General Office Building		
1.56 Ave. Trip Rate AM Peak Hour of Adjacent Traffic	88%	12%
1.49 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	17%	83%
Retail - Shopping Center		
1.03 Ave. Trip Rate AM Peak Hour of Adjacent Traffic	61%	39%
3.74 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	48%	52%

Trip Rates:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
High Rise Apartments	Trips Per Residential Units	0.08	0.23	0.30	0.21	0.14	0.35
General Office Bldg	Trips Per 1000 SF	1.37	0.19	1.56	0.25	1.24	1.49
Shopping Center	Trips Per 1000 SF	0.63	0.40	1.03	1.80	1.94	3.74

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
High Rise Apartments	Trips Per Residential Units	32	97	129	92	59	151
General Office Bldg	Trips Per 1000 SF	419	57	476	77	377	454
Shopping Center	Trips Per 1000 SF	188	121	309	539	583	1122
	Total	639	275	914	708	1019	1727

Trip Reductions:	Residential	Commercial
Transit	40%	30%
Internal Capture (People Walking)	10%	10%
Pass-By trips	0%	10%
Total	E00/	E00/

Adjusted Trip Generation:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
High Rise Apartments	Trips Per Residential Units	16	49	65	46	30	76
General Office Bldg	Trips Per 1000 SF	210	29	239	39	189	228
Shopping Center	Trips Per 1000 SF	94	61	155	270	292	562
	Total	320	139	459	355	511	866

Existing Development Trip Generation

Data:

176,188 SF - Retail

From Institute of Transportation Engineers:

In Out (directional

Retail - Shopping Center

1.03 Ave. Trip Rate AM Peak Hour of Adjacent Traffic3.74 Ave. Trip Rate PM Peak Hour of Adjacent Traffic

flow) flow) 61% 39% 48% 52%

Trip Rates:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	In	Out	Total	In	Out	Total
Retail	Trips Per 1000 SF Gross Leasable Area	0.54	0.49	1.03	1.80	1.94	3.74

Trip Generation:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
Retail	Trips Per 1000 SF Gross Leasable Area	94	87	181	316	343	659
	Total	94	87	181	316	343	659

Trip Reductions: Residential Commercial

 Transit
 40%
 30%

 Internal Capture (People Walking)
 10%
 10%

 Pass-By trips
 0%
 10%

 Total
 50%
 50%

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	ln	Out	Total
Retail	Trips Per 1000 SF Gross Leasable Area	47	44	91	158	172	330
	Total	47	44	91	158	172	330

		AM Peak Hou	ır	PM Peak Hour			
	In	Out	Total	In	Out	Total	
Total	273	95	368	197	339	536	

Project: GEICO

Proposed Development Trip Generation

Data:

500 Apartments 810,000 SF - Office

From Institute of Transportation Engineers:

	ln	Out
	(directional	(directional
Residential - Apartments	flow)	flow)
0.51 Ave. Trip Rate AM Peak Hour of Adjacent Traffic	16%	84%
0.62 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	67%	33%
Office - General Office Building		
1.56 Ave. Trip Rate AM Peak Hour of Adjacent Traffic	88%	12%
1.49 Ave. Trip Rate PM Peak Hour of Adjacent Traffic	17%	83%

Trip Rates:

Land Use	Units	AM Peak Hour			PM Peak Hour		
Land Ose		ln	Out	Total	In	Out	Total
Residential		0.00	0.42	0.51	0.42	0.20	0.63
Apartments	Trips Per Residential Units	0.08	0.43	0.51	0.42	0.20	0.62
General Office Bldg	Trips Per 1000 SF	1.37	0.19	1.56	0.25	1.24	1.49

Trip Generation:

Land Use	Units	AM Peak Hour			PM Peak Hour		
Land Ose		In	Out	Total	ln	Out	Total
Residential		41	214	255	200	100	310
Apartments	Trips Per Residential Units	41	214	255	208	102	310
General		1112	152	1264	205	1002	1207
Office Bldg	Trips Per 1000 SF	1112	152	1204	205	1002	1207
	Total	1153	366	1519	413	1104	1517

Trip Reductions: Residential Commercial

Total	50%	50%
Pass-By trips	0%	10%
Internal Capture (People Walking)	10%	10%
Transit	40%	30%

		AM Peak Hour			PM Peak Hour		
Land Use	Units	In	Out	Total	In	Out	Total
Residential		24	107	128	104	E1	155
Condos	Trips Per Residential Units	21	107	120	104	51	155
Day Care		EEC	76	622	400	E04	604
Center	Trips Per 1000 SF	556	76	632	103	501	604
	Total	577	183	760	207	552	759

Existing Development Trip Generation

Data:

514,257 SF - Headquarters

From Institute of Transportation Engineers:

In Out (directional

Office - Headquarters

1.47 Ave. Trip Rate AM Peak Hour of Adjacent Traffic1.39 Ave. Trip Rate PM Peak Hour of Adjacent Traffic

flow) flow) 93% 7%

11%

89%

Trip Rates:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	In	Out	Total	In	Out	Total
Office	Trips Per 1000 SF Gross Floor	1.37	0.10	1 17	0.15	1 24	1 20
Headquarter	Area	1.37	0.10	1.47	0.15	1.24	1.39

Trip Generation:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	ln	Out	Total	In	Out	Total
Office	Trips Per 1000 SF Gross Floor	702	F2	756	70	626	715
Headquarter	Area	703	53	756	79	636	7 15
	Total	703	53	756	79	636	715

Trip Reductions: Residential Commercial

Transit 40% 30%
Internal Capture (People Walking) 10% 10%
Pass-By trips 0% 10%

Total 50% 50%

Adjusted Trip Generation:

		AM Peak Hour			PM Peak Hour		
Land Use	Units	In	Out	Total	ln	Out	Total
Office Headquarter	Trips Per 1000 SF Gross Floor Area	352	27	379	40	318	358
riodaquartor	Total	352	27	379	40	318	358

	,	AM Peak Hou	r	PM Peak Hour		
	In	Out	Total	ln	Out	Total
Total	225	156	381	167	234	401